Comment No.	Commenter	Text Highlighted	Comment	Response
				Document Reviewed—LPR_RM10.9_BODR_08012012.docx
				Document with Comments—EPA Comments_BODR_Tables 2-1 to 2-6.pdf
1	USEPA	TABLE 2-2; CERCLA Offsite Rule; 40 CFR 300.440; CERCLA wastes may only be placed in a facility operating in compliance with RCRA or other applicable federal or state requirements. Establishes criteria and a process for determining whether those facilities are acceptable.; Sediment disposal facilities must be approved by the USEPA Offsite Rule Coordinator	CERCLA and the NCP are not ARARs – they are the authority under which the action is carried out. While the NCP applies to the removal, there is no need to list it in the ARARs table.	
2	USEPA	TABLE 2-2; National Emission Standards for Hazardous Air Pollutants; 40 CFR 61; ARAR	How can this not be ARAR if the NJ air regulations are? See next entry.	
3	USEPA	TABLE 2-2; National Emission Standards for Hazardous Air Pollutants; 40 CFR 61; is not anticipated to occur	This will need to be demonstrated/justified.	
4	USEPA	TABLE 2-2; Standards for Hazardous Air Pollutants; N.J.A.C. 7:27 Air Pollution Control; is not anticipated to occur	As above, this may be true, but there should be some demonstration of this.	
5	USEPA	TABLE 2-3; Fish & Wildlife Coordination Act 16 U.S.C. 661; 40 CFR 2 6:302(g); Applicable	Why not applicable?	
6	USEPA	TABLE 2-3; Fish & Wildlife Coordination Act 16 U.S.C. 661; 40 CFR 2 6:302(g); , however, given the relatively large size of the lower Passaic River and the depth and area of the existing channel, the project activities should not affect the ability of migratory species to migrate and/or spawn within the river and utilize their preferred habitats.	This seems to be an explanation of why the CPG does not expect to comply with the fish window. This is not the place for this discussion – put it in the text somewhere. It needs to be discussed more substantively, and the discussion should be based on actual data/facts.	
7	USEPA	TABLE 2-6; 7:7E-3.6 Submerged Vegetation Habitat; Therefore, no impacts to submerged vegetation habitat are expected and the Removal Action would comply with this policy.	Each one of these entries has an opinion as to whether this requirement will be met, and many of the statements have the phrase that they "anticipate." It would be better to demonstrate that the requirement wouldn't apply or will be met, rather than opining.	
8	USEPA	TABLE 2-6; 7:7E-3.25 Flood Hazard Areas; Following sediment removal, the areas will be backfilled with a cap which will provide no net fill.	This needs a bit more discussion. Is no net fill sufficient to avoid flooding?	
				Document Reviewed—LPR_RM10.9_BODR_08012012.docx
				Document with Comments—EPA Comments_BODR.pdf
1		General Comment	Throughout this document the terms "remedy" and "remedial action"	

	USEPA		are used. These should refer to "removal action" or "response action". Please revise throughout.
2	USEPA	General Comment	Further clarification is needed in the 90% design submittal on how the dredge volumes will be determined and actually met. The document talks about a 6-inch vertical dredge tolerance. Is the intention, then, to target 2 feet, realizing that sometimes you may under-dredge and sometimes you may over-dredge? Or will the strict criteria be that a minimum 2-foot dredge occurs, in which case a 2.5 foot dredge target would be needed? If the more conservative approach is taken, as is implied by Table 3-1 which lists concentration summary data for the top 2.5 feet bgs, then the actual dredge volume will likely be higher than 18,000 CY, perhaps significantly. In either case, the design needs of the cap may end up dictating the approach used. We look forward to seeing more detail on this issue in the next design submittal, and would welcome an interim discussion, as needed.
3	USEPA	General Comment	Pore water sampling should be used to monitor the effectiveness of the cap, and baseline measurements will be needed. This is not addressed in the document. EPA and the CPG should arrange a meeting in the near future to discuss this issue.
4	USEPA	Appendix B, Dredging Production Rate Calculations	Please provide formulas and sample calculation for dredging production spreadsheets.
5	USEPA	Appendix B, Dredging Production Rate Calculations	The title for "3 cy bucket 24 hours/day" spreadsheet appears to be mislabeled as 5 cy. Please confirm and revise, as necessary.
6	USEPA	Page 1-1, Section 1.1, 1st Paragraph	The removal area is listed here as approximately 5.6 acres, whereas it is listed as 5 acres in the AOC. For clarity, please add a brief explanation or footnote of why the area increased.
7	USEPA	Page 1-1, Section 1.1, 3rd Paragraph	The last 3 sentences of this paragraph are confusing. Please edit the language for clarity.
8	USEPA	Page 1-2, Section 1.2, 3rd Bullet	a. Add the word "approximately" before each instance of the 18,000 CY figure. Note that the 18,000 cubic yard volume is based on the in-situ dimensions of the dredge area. The actual volume removed is typically greater and should be estimated in the BODR. Please refine this estimation based on the techniques specified in the USACE Technical Guidelines for Environmental Dredging of Contaminated Sediment (or similar approach) for the pre-final design report. b. Add language at the end of this bullet indicating that the ex situ volume to be treated depends upon what the treatment vendor(s) can address.

9	USEPA	Page 2-1, 3rd Paragraph	For consistency with the NCP, please rewrite the second sentence as: However, pursuant to 40 CFR Section 300.415(j), the removal action shall, to the extent practicable considering the exigencies of the situation, attain Applicable or Relevant and Appropriate Requirements (ARARs) under federal environmental or state environmental or facility siting laws. And delete the next two sentences.
10	USEPA	Page 2-1, 4th Paragraph	Insert the phrase "set forth in the NCP" after the word "criteria." In addition, re-write the following 3 bullets as follows: · Applicable requirements are those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance found at a CERCLA site. · Relevant and appropriate requirements are those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws, that, while not "applicable to a hazardous substance, pollutant, contaminant, remedial action, location or other circumstance at a CERCLA site," address problems or situations sufficiently similar (relevant) to those encountered at a CERCLA site, that their use is well suited (appropriate) to the particular site. · TBC criteria are non-promulgated, non-enforceable advisories, criteria or guidance to be considered for a particular release that may be useful for developing a CERCLA response action or for evaluating what is protective to human health and/or the environment. Examples of TBC criteria include those in the NJDEP (1997) dredging technical manual and related best management practices.
11	USEPA	Page 2-2, Section 2.1	Start the second to last paragraph of this section as "The TCRA will be performed in such as way as to meet the surface water..." rather than stating that this is the objective of the TCRA
12	USEPA	Page 2-3, Section 2.2	Delete the 4th sentence in the first partial paragraph at the top of this page ("Since there are....").
13	USEPA	Page 2-3, Section 2.2, Last Paragraph	Replace the second sentence in this paragraph with: Contaminated environmental media (e.g., sediment) are not hazardous waste but can become subject to regulation under RCRA if they "contain" hazardous waste. EPA generally considers contaminated environmental media to contain hazardous waste: (1) when they exhibit a characteristic of hazardous waste; or (2) when they are contaminated with concentrations of hazardous constituents

			from listed hazardous waste that are above health-based levels.
14	USEPA	Page 3-1, Section 3.1	After the first sentence, please delete the first two paragraphs of this section and replace with the following language: Adjacent land use is predominantly industrial in the lower River Miles [RMs] (near Newark Bay) and starts to become more commercial, residential, and recreational near RM 4. Land use is increasingly residential and recreational above RM 8. The LPRSA has been industrialized and urbanized for more than two centuries; it has served as the receiving environment for industrial and municipal waste discharges since the nineteenth century. However, the river is now being used increasingly for recreational activities such as boating and fishing as parks and boat ramps are actively being restored or newly established. Natural habitat areas along the shoreline, including wetland and mudflat habitats, are limited to small patches or isolated areas.
15	USEPA	Page 3-2, Section 3.3	The second paragraph of this section contains the word "willower." Is this the correct word?
16	USEPA	Page 3-2, Section 3.4.1	Please delete the last sentence on this page. However, please not that EPA's recommended PRG for total dioxin TEQ in residential soil is now 51 ng/kg.
17	USEPA	Page 3-3, Section 3.4.1	a. The paragraph at the top of this page states "0 to 2.5 ft below ground (sediment) surface (bgs), representing the dredge interval...." Please see General Comment No. 2, and clarify, as necessary. b. Please either delete the sentence starting "COPC concentrations generally decrease with increasing depth; however..." or provide more detail on this topic. The situation is a bit more complicated than outlined.
18	USEPA	Page 3-3, Section 3.5	a. Please provide the CPG's detailed hydrodynamic modeling report for review. b. Describe the method(s) used to estimate the 100-year flood, period of record, data and references. Note that the flood of October 10, 1903 reached a peak flow of 35,800 ft3/s at the Dundee Dam (approximate RM 17) as estimated by the New Jersey State Geologist's office. Describe the implications of using a 200- or 500-year flood flow estimate on cap design to justify the use of the 100-year criteria. In any case, provide the rationale used. c. Please provide clarification on the meaning of "HFI data" mentioned in the footnote.
19	USEPA	Page 3-4, Section 3.5, 1st Paragraph	a. The text of the 1st paragraph states: "The Physical Water Column Monitoring (PWCM) data collected in fall 2009...was

			b. used for calibrating the model, which was done by varying the bottom roughness and eddy viscosity parameters." Please provide a list of the calibrated values of these parameters. c. 4th Paragraph, last sentence – the reason for a qualitative rather than quantitative comparison should be explained. d. In addition to Figures 3-1 and 3-2, it would be helpful to include a map showing the shear stresses. e. Please provide some context for the maximum total shear stress and bottom velocities simulated near RM 10.9. Are these relatively high or low, as compared to the rest of the river?
20	USEPA	Figures 3-1 and 3-2	Please provide a reference (in Section 10) for Moffatt & Nichol, 2012, referenced in the "Notes" section of these figures.
21	USEPA	Page 3-4, Section 3.7	a. Please clarify what maximum vessel draft, height, beam and length limitations will be imposed on barge and support vessels for the removal action. b. The logistical coordination required to navigate the bridges is a significant concern for this project. In order to be fully prepared, please compile the following information for each bridge, which EPA would appreciate receiving as an interim submittal: i. Owner ii. Will it need to be opened to pass? Is clearance sufficient at low tides only? iii. Construction/ maintenance operations scheduled or planned, and will the work affect navigation
22	USEPA	Page 4-1, Section 4.2.1	Please see General Comment No. 2. The reference to an included 6-inch vertical dredge tolerance is unclear. An 18,000 cy dredge volume will only allow excavation down to 2 feet. The volume associated with a neat line dredge prism volume of 2.5 ft bgs would be approximately 22,600 yd^3.
23	USEPA	Page 4-1, Section 4.2.3	Define how the offsets will be kept to a minimum and discuss how both vertical and horizontal offsets will be set. Investigate and present alternate methods to achieve removal objectives in pre-final design, if required.
24	USEPA	Page 4-2, Section 4.3.1.2, 1st Paragraph	The first sentence of this section refers to "the performance requirements of the technical specifications (see Figure 4-5)." However, Figure 4-5 does not include the technical specifications. Please provide this additional information, or revise the language, as necessary.

25	USEPA	Page 4-2, Section 4.3.1.2, 2nd Paragraph	Please review the assumption with respect to the average fill of bucket. USACE estimates an average 50-70 percent fill for environmental mechanical dredging. It is unclear if the 30 percent water should be subtracted from the 80 percent fill for an effective 50 percent fill. Please clarify and revise, as necessary.
26	USEPA	Page 4-2 Section 4.3.2	The last sentence stated that the vertical dredge cut tolerance will be ±6 in. Does this mean the minimum vertical cut could be as little as 1.5 feet? Please clarify and revise, as necessary. Also see General Comment No. 2.
27	USEPA	Page 4-2, Section 4.3.3	Using a 5 cy bucket and dredging 12 hours/ day, the production rate listed at the bottom of Page 4-2 is 482 CY/day. However, it is listed as 534 CY/day in Table 4-1 on the following page. Please clarify.
28	USEPA	Page 4-3, Section 4.3.4, 3rd Paragraph	The language in this paragraph about using best practices during dredging to avoid the need to remove and treat excess water is confusing as written. Please clarify in the pre- final design.
29	USEPA	Page 4-4, Section 4.3.6	Please prepare a to-scale figure showing the dredging and other river operations at the Removal Area, so we may visually evaluate impacts to river use.
30	USEPA	Pages 4-4 to 4-6, Section 4.4	The analyses and calculations used to estimate the amount of resuspension that will occur need to be elaborated upon and strengthened in the pre-final design.
31	USEPA	Page 4-5, Section 4.4.2.1	Please include, here or in an appendix, the assumptions that were used to estimate the mass of 2,3,7,8-TCDD to be removed, with explanation.
32	USEPA	Page 4-5, Section 4.4.4	Silt curtains are effective in reducing turbidity and should be retained for use at the site as a contingency option. A protocol for the upgrade of turbidity control to use silt curtains– based on visual observations, turbidity measurements and chemical analytical results– should be presented in the pre-final design. Please modify this section to indicate silt curtains will be utilized if site conditions indicate a need, and/or what alternative contingency plans the CPG intends to use. Note that the last paragraph of section 4.4.6 is consistent with this suggestion.
33	USEPA	Page 4-5, Section 4.4.5	State that silt curtains have “negated the need for” silt curtains, rather than the use of them.
34	USEPA	Page 4-6 Section 4.4.6	Please specify under what conditions the excavation/dredging will stop, including, but not limited to, severe weather conditions.
35	USEPA	Page 4-6, Section 4.5	Rather than state that the City of Lyndhurst has indicated that adjacent park lands “cannot” be used, state that they “should” not be used. Also, it is the Township of Lyndhurst, not City.
36	USEPA	Page 4-7, Section 4.6.1	EPA and the CPG need to discuss the water quality monitoring

			requirements in more detail prior to submittal of the pre-final design. Nearly continuous turbidity monitoring is proposed upstream, downstream and adjacent to the RM 10.9 removal activities, while weekly chemical monitoring is proposed adjacent to the work area only. We may want to consider adding chemical monitoring upstream and downstream of the removal area too, at least to establish some sort of baseline, and we also should discuss the frequency of sampling. There are two data needs of the monitoring program – the first would be to evaluate the dredging program as it is occurring and the second would be to inform future dredging operations. To address both of these needs, more data may prove useful than originally contemplated.
37	USEPA	Page 4-7, Section 4.6.2	How will the site boundary be defined?
38	USEPA	Page 4-8 Section 4.7	Please consider for inclusion in the H&S discussion: heat and cold stress conditions, decontamination, work zone safety, working around heavy equipment, and restrictions to navigation.
39	USEPA	Page 5-1, Section 5, Point 10	Add that water may, instead, be pumped directly to tanker trucks for off-site disposal.
40	USEPA	Page 5-1, Section 5, 2nd Paragraph	The bench scale testing was performed in August 2012, and not July 2012. Please confirm and revise, as necessary.
41	USEPA	Page 5-1, Section 5.1, 1st and 2nd Bullets	More detail is needed on this topic, which will likely be included in the Pilot Scale Test Work Plan. Is reducing total dioxin TEQ to a concentration of 1,000 ng/kg appropriate (as was noted earlier, the revised recommended PRG is now 51 ppt)? What other sediment concentrations will be targeted? Will the goal be to meet NJDEP soil cleanup criteria for all contaminants?
42	USEPA	Page 5-2, Section 5.2	a. 1st Paragraph, 3rd Sentence – should the word "obtainable" be "accessible?" b. 1st Bullet, Barge dewatering – add "or off-site disposal" to the second sub-bullet under this bullet. c. 3rd Bullet, Sediment washing – more detail will be needed here, and in Section 5.2.4, if the pilot studies occur.
43	USEPA	Page 5-3, Section 5.2.1	Change the last sentence of this section to "meet applicable permit limits."
44	USEPA	Page 5-3 Section 5.2.3, Last Sentence	"...it was assumed that the dredged sediment will contain 5 percent (by weight) of material greater than 4 in. and approximately 60 percent (by weight) of material greater than 1/4 in." Please clarify the treatment method for the 60% material greater than 1/4 in. A water rinse will likely not be sufficient to decontaminate the gravel size materials. Revise as necessary.

45	USEPA	Page 5-4, Section 5.2.6	How will the water quality of the barge water be determined and when? This will affect disposal options. Similarly, how will the constituents present in water collected during either the sediment washing or the sediment stabilization process be determined and when? If treatment and surface water discharge of water remains an option, these could become time-critical questions. Also, add transport to a permitted off-site disposal facility as an option.
46	USEPA	Page 5-4 Section 5.4	Please clarify the time necessary to start up and shut down the operation and revise, as necessary.
47	USEPA	Page 6-1, Section 6	Please clarify the objective of stabilizing the sediment using Portland cement.
48	USEPA	Page 6-1, Section 6.2, 2nd Bullet	Where does the CPG anticipate managing debris?
49	USEPA	Page 6-1, Section 6.2, 3rd Bullet	Please specify if the cement will be added at 10 percent by weight based on the wet weight of the sediment. In the pre-final design, please describe any adjustments to this ratio based on sediment water content.
50	USEPA	Page 6-2, Section 6.2.2	It is preferred to state that the barge will be unloaded in about an hour instead of stating that 4000 cy/day can be processed. Please revise. Also, see Comment 22 about the daily production rate.
51	USEPA	Page 6-2, Section 6.2.6	This section indicates the water volume is 30,176 gal/day versus 40,176 gal/day estimated in Section 6.2.1. Please revise, as necessary.
52	USEPA	Page 6-3, Section 6.3	As you know, these assumptions need to be verified.
53	USEPA	Page 7-1, Section 7.1, bullet 1	The 100-year recurrence interval may not be sufficiently conservative for the cap design. Please evaluate an estimate of at least the 200-year flood flows as well.
54	USEPA	Page 7-1, Section 7.1, bullet 3	Please provide sufficient information in Section 3 to justify that ice scour does not need to be a major concern for this effort.
55	USEPA	Page 7-1, Section 7.1, bullet 5	The design Darcy velocity is critical to the assessment of potential cap performance relative to pore water chemical transport. Please provide site-specific measurements for permeability and gradient or use conservative literature values to estimate a maximum Darcy velocity for design.
56	USEPA	Page 7-1, Section 7.2.1	This section states that a treatability study will be performed to aid in the cap design. When will this occur and what will it entail?
57	USEPA	Page 7-3, Section 7.2.2	Please justify the use of the 100-year return period flood flow as the proper criteria for design of the cap armoring layer.

58	USEPA	Page 7-4, Section 7.2.2.1	Rounded stone may be preferred over angular stone for the cap, for habitat purposes. Also, it is not apparent what K1 value(s) were used. Please provide sample calculation and full table of parameters chosen for design as appendix material.
59	USEPA	Page 7-5, Section 7-3	a. Is use of a thin cap, perhaps using a material like AquaBlok, being considered in low- energy portions of the removal area, or is only a uniform cap design currently being planned? b. Please assure that the final cap design, including the geotextile layer placed, allows for ecological repopulation of the area. c. The volume of cap materials to be placed is less than the volume to be removed. Please provide further explanation on why this is appropriate, and protective of both human health and the environment and against flooding.
60	USEPA	Page 7-7, Section 7.3, Table 7-6	The surface area quantity seems low relative to the 5.6 acres designated as removal area. Please address quantities and estimates in greater detail in pre-final design documents.
61	USEPA	Page 7-7, Section 7.6.1, bullet 1	Please provide specific method and example calculation as appendix for agency review.
62	USEPA	Page 8-1, Section 8.2	a. Add the phrase "because they do not apply to on-site activities" after "however, those requirements are not considered ARARs" in the 2nd paragraph of this section. b. Replace the 3rd paragraph in this section with the following: A hazardous waste is either a "listed" waste or a "characteristic" waste. Contaminated environmental media are not hazardous waste but can become subject to regulation under RCRA if they "contain" hazardous waste. EPA generally considers contaminated environmental media to contain hazardous waste: (1) when they exhibit a characteristic of hazardous waste; or (2) when they are contaminated with concentrations of hazardous constituents from listed hazardous waste that are above health-based levels. In 2008, USEPA prepared a memo to the file for the Lower Passaic River Study Area that discussed their consideration of the Passaic River sediments pursuant to RCRA 40 CFR Section 261.31. USEPA reviewed historical information and consulted USEPA Headquarters Office of Solid Waste, and concluded that it did not have sufficient evidence to conclude that the sediments in the Passaic River contain "listed" hazardous waste per 40 CFR 261. However, if the sediment exhibits a characteristic of hazardous waste, it must be managed as

			though it were a hazardous waste. The decision tree for RM 10.9 sediment disposal is listed below: c. In the 3rd bullet (starting on this page and continuing onto the next), please replace the phrase "available per the LDR" with "likely to be able to achieve the applicable standards".
63	USEPA	Page 8-1, Section 8.2	What is meant by the statement that this triggers the RCRA OSR?
64	USEPA	Page 8-3, Section 8.4	a. Please provide the details for the TCLP and other characterization sampling that will be conducted, both horizontally and vertically, for all waste streams. Please include how the samples will be attained, what parameters will be tested for, and the schedule for conducting this sampling and receiving results. b. Replace the 3rd sentence of this paragraph with the following: Even if the material could be disposed of at a Subtitle D landfill, the CPG may decide to send the material to a Subtitle C landfill due to the potential long-term liability associated with the materials. c. Should barge water be added to the list of waste streams that need to be profiled? When and how will profiling of these waste streams occur?
65	USEPA	Page 12-1	Please confirm that the specifications will address the following. Additional items may be added to this list: a. Pre- and post-dredging survey with measurements per unit area and acceptable accuracy b. Dredging performance metrics and acceptable tolerances c. QA/QC for geotextile manufacture and installation d. QA/QC and metrics for cap amendment materials supply and placement, if utilized e. QA/QC and metrics for aggregate used in cap, including placement measurements and tolerances.